DOCUMENT RESUME

ED 114 459 CE 005 078

AUTHOR	Perkins, Lawrence H.
TITLE	The Evaluation of a Comprehensive Vocational Education Program for Career Development for Grades K-12 in Orange County, Florida (An Interim Evaluation of a Developing Program): Final Report.
INSTITUTION	University of West Florida, Pensacola.
SPONS AGENCY	Florida State Dept. of Education, Tallahassee. Div. of Vocational, Technical and Adult Education.
PUB DATE	Jun 73
NOTE	60p.; Appendix C deleted due to poor reproducibility
EDRS PRICE	MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS	*Achievement Rating; Career Awareness; *Career Education; *Comparative Analysis; *Elementary Secondary Education; Evaluation Methods; *Program Evaluation; Vocational Education
IDENTIFIERS	Florida (Orange County)

ABSTRACT

The purpose of the project was to plan, implement, and evaluate a comprehensive vocational education program for career development in Grades K-12, in one metropolitan school district in Florida. Data for the evaluation of the program were collected from students, teachers, counselors, and administrators. The hypotheses for guiding the evaluation of students in career education programs are listed. Achievement in elementary schools, junior high schools, and high schools in career education instruction were measured using specially constructed instruments, and comparison made between a random selection of students in career education schools and in traditional schools. The design included pre and post observations. On the basis of the results it was concluded that achievement in the elementary schools and junior high schools showed no significant difference from the comparison group in regard to scores on the tests designed to measure knowledge about careers. However, high school students in the career group learned more entry level job skills than the comparison students but there was no difference between the groups in relation to scores on a multiple-choice type instrument designed to measure knowledge about careers. A selected bibliography, list of consultants, instruments, and forms used in the study are appended. (Author/EC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED114459

SEP 24 1975

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Final Report

Project No. VTAD-5C2-0055

From July 1972 to June 1973

The Evaluation of A Comprehensive Vocational Education Program for Career Development for Grades K-12 in Orange County, Florida (An Interim Evaluation of A Developing Program)

The University of West Florida
Pensacola, Florida

Lawrence H. Perkins

The project reported herein was conducted pursuant to a grant from the Division of Vocational, Technical, and Adult Education, Florida State Department of Education. Contractors undertaking such projects are encouraged to express freely their professional judgments in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent the official position or policy of the Florida Department of Education.

CE005078

TABLE OF CONTENTS

INTRODUCTION. 1

Career Education in Florida. 2

The Orange County Project. 3

EVALUATION OF THE ORANGE COUNTY PROJECT 6

Objectives of the Project 6

Purpose of the Evaluation. 8

Definitions of Terms 8

Limitations of the Study 10

METHOD OF STUDY AND SOURCE OF DATA. 12

Sample Model 16

Evaluation Design. 17

REVIEW OF RELATED RESERACH. 21

ACHIEVEMENT IN THE ELEMENTARY SCHOOLS 25

Knowledge about Careers. 26

Positive Attitudes Toward the Significance of Man's Work in Our Society 26

Participation in Career Related Curriculum Activities. . . 27

Attendance Rate. 32

Productive Work Habits 32

Counseling Service 32

Summary of Findings. 32

Conclusions. 33

ACHIEVEMENT IN JUNIOR HIGH SCHOOLS. 34

Entry Level Job Skills 34

Productive Work Habits, Traits, and Attitudes. 35

Knowledge about Careers. 38
Career Related Curriculum Activities 38
Attendance Rate. 38
Counseling Service 39
Summary of Findings. 39
Conclusions. 40
ACHIEVEMENT IN THE HIGH SCHOOL PROGRAM. 42
Skills and Knowledge 43
Knowledge about Careers. 44
Attitudes Toward Employment. 44
Career Related Curriculum Activities 44
Improved Overall Performance 45
Counseling Service 46
Summary of the Findings. 47
Conclusions. 48
RECOMMENDATIONS. 50
APPENDIX A. 51
APPENDIX B. 53
APPENDIX C. 54
APPENDIX D. 67

INTRODUCTION

A stated purpose of the public schools in our society is to provide each youth with certain fundamental knowledge and the basic skills which form the foundation leading ultimately to economic independence and civic and social self-sufficiency. Explicit or otherwise, this has been a part of public education goals since the turn of the century. Beyond such a responsibility, the public schools have a moral obligation to help maintain a balance in trained manpower supply and demand.

Perhaps the most positive efforts made by the public schools toward directing and training youth for occupations to satisfy a national demand was during that short period after October 1957, when the Russians had launched the first outerspace satellite and assumed a momentary world leadership position. Even so, the effort at that time was geared to higher levels of occupational effort, those pursuits involved science and mathematics, and neglected the critical thrust needed in the area of skilled and semi-skilled occupations. At any rate, this national effort slowly died down as federal monies were reduced or withdrawn and as American dollars and know-how surpassed Russian efforts in the race to land a man on the moon.

In recent years the trained manpower supply and demand has wandered out of balance. While high school and college graduates with specific skills experience generally favorable employment opportunities, those youth and adults who leave school with no career preparation or job skills, experience difficulty finding employment. In the labor market, jobs which demand skilled craftsmen, technicians, and technologists go unfilled every year while jobs which require people with no specific skills or career preparation are in short supply.

More often than not, parents neglect their primary responsibility by passing the educational and career guidance function on to the schools. Success has been inherent where parents have taken seriously the education of their children, assessed their needs, interests, and abilities and selected realistic educational and vocational goals which could be fulfilled. While some parents give their children adequate assistance, a large majority has little or no expertise in this area and divorces itself from the whole matter by taking little or no action and passing the responsibility on to the understaffed public schools.

There is still another group of middle class Americans who demand college graduation of their children without attempting to ascertain needs, interests, and abilities, or alternate routes to economic success. The public schools are staffed with teachers, counselors, and administrators of this middle class American society who strongly support the

ideal of college graduation as the only route to success for young people whether or not the degree program includes career goals or job preparation. Most students receive no positive guidance from home; in a similar manner, they receive little or no positive direction and little instruction to help them with career choice from the elementary and secondary schools. While it has long been assumed that students should have exploratory experience relative to careers and be familiar with preparation requirements, employment opportunities, working conditions, rewards, and opportunities for advancement before making a career choice, this type of instruction is not included in most elementary and secondary school curricula. Instruction in the curricula has vague, long range goals and purposes which requires the student to be overly patient or highly imaginative to see the true meaning of this education. While there is a group of students who are served by this type of instruction, there is a much larger group who never receive career education needs because of it. Some educators have been aware of this problem for a long time and have tried innovative measures for correction while other educators are either ignorant of the problem or ignore it. In Florida a few of the educators have recognized the problem and are attempting to construct solutions to it through the career education concept.

Career Education in Florida

Beginning in 1970, the Florida Department of Education, Division of Vocational, Technical, and Adult Education, expanded its support of exemplary projects to include four programs for the educationally disadvantaged youth strategically located in Dade, Duval, Escambia, and Hillsborough Counties. The leaders of these programs met periodically with the chief administrator of exemplary projects at the state level to coordinate their efforts and ideas about revisions which would better serve Florida youth. In January 1971 the group met in Tallahassee to discuss preliminary plans for a program which would center about career education and would not be limited to the educationally disadvantaged youth but open to all students. Coordination of elementary schools, middle schools, and high schools was included in the tentative plans to establish one program in Florida if and when a county school board expressed interest. Simultaneously leaders in the U. S. Office of Education made it known that they had deep concern for the school curriculum which served only the general education needs of youth and expressed an interest to support some exemplary projects which would offer career awareness in the elementary schools, career exploration in the middle schools, and career preparation in the high schools (1)*.

During the spring of 1971, the Orange County School Board expressed interest in a career education model program. Planning sessions began immediately; a proposal was constructed and submitted to the Department of Education for partial funding. State and federal funds were made available and the program began in August of 1971 and was continued through the 1972-73 school year. The program included six elementary schools, three junior high schools, and one high school.

---

*See Appendix A for Bibliography

The University of West Florida (UWF), Department of Vocational-Technical Education, contracted to evaluate the effectiveness of the program for the 1971-72 school year and the 1972-73 school year. Evaluation data were collected from school administrators, counselors, teachers, and students for a comprehensive evaluation to measure the program achievements.

The Orange County Project

Instructional units and individualized learning activity packages were used as vehicles for fusing vocational and academic skills in the existing secondary curriculum. Elementary programs offered students career awareness instruction in grades K-6, junior high schools offered students in grades 7-9 opportunities for career exploration in a variety of occupational families, and students in grades 10-12 received instruction designed to develop entry level job skills and instruction leading to the next level of education or further preparation to enter the world of work.

During the first two years of operation, the program development stages included the following activities:

1. Pre-service and in-service workshops were conducted to develop and refine instructional materials for implementing career education. Directors of innovative curriculum development projects in Florida conducted some of the workshops while they served as consultants in other workshops.
2. Some of the teachers volunteered to participate. However, all of the teachers in the project schools did not participate and, as a result, all of the students in the participating schools did not receive career-related instruction.
3. Selected staff members who were certified to teach in vocational and practical arts education were designated to assist teachers in the six elementary schools to develop and implement career oriented activities.

The "Mager and Beach" (2) method of developing vocational instruction was used as a guide for constructing the curriculum materials. Curriculum content was selected on the basis of an analysis. Criteria considered in selecting the curriculum content were, (a) the characteristics of the students, (b) job requirements and, (c) analysis of test data. Homogenous content was grouped to form instructional units. Goals, objectives, student's activities, and pre and post tests; evaluation checklists were constructed. The units were labeled Learning Activity Packages (LAPS).

The senior high school was selected as a participating unit because of its central location in the county, the apparent ease of converting a traditional vocational education philosophy to a comprehensive career

education program, adequate facilities, adequate available space for future growth and expansion, and commitment of the faculty to innovations in education. The elementary and junior high schools were selected because of an expressed interest by the faculty and staff, previous experiences in career development projects, and the fact that the elementary school students were scheduled to enter the junior high schools after completing grade six and the junior high school students were scheduled to enter the senior high school after completing grade nine. This provided opportunities for continuous career education for the student from grades K-12. However, at the end of the junior high school year, the student had two alternatives: to attend the traditional high school which might not offer career education, or to attend the career education high school. The career education high school was also open to all Orange County youth; however, they were required to make application before being admitted. The following schools represented the career education program in Orange County:

School	Grades	Enrollment*
Wymore Voc.-Tech. Center	9-12	500
Union Park Jr. High School	7-9	1398
Winter Park Jr.High School	7-9	962
Apopka Jr. High School	7-9	958
Bonneville Elem. School	K-6	477
Killarney Elem. School	K-6	780
Lovell Elem. School	K-6	933
Columbia Elem. School	K-6	580
Hungerford Elem. School	K-6	350
Wheatley Elem. School	K-6	1160
	TOTAL	8098

*All students enrolled did not necessarily receive career related instruction because teacher participation was voluntary.

The proposal for the career education project included the following four components (3):

1. Phase I - Occupational Orientation - occupational awareness instruction, integrated into the existing elementary curriculum, designed to expand the student's knowledge and aspirations related to the personal and social significance of work.

2. Phase II - Job Cluster Exploration - instruction integrated into the junior high school curriculum to provide exploration and in-depth study of job clusters.

3. Phase III - Job Skills Specialization - entry level job and employability skills which tend to fuse the vocational and academic curriculum in the participating high school.

4. Phase IV - Occupational Guidance, Counseling, Cooperative Work Experience, and Placement Service - occupational guidance and counseling is provided throughout grades K-12, cooperative work experiences are available for junior and senior high school youth and job placement and follow-up service for students when they leave the program.

The senior high school specialization phase provided opportunities for students to select and participate in one or more of the following sixteen areas of specialization: carpentry, cabinetmaking, masonry, electricity, sewing, food service, child care, health occupations, retailing, business education, vocational music, recreational aide, auto mechanics, small gasoline engine repair, horticulture, and building maintenance. The students also studied language arts, math, science, and social studies which were related to the area of specialization. A team of two vocational teachers and two academic teachers with the service of one guidance counselor and one teacher aide coordinated each area of specialization as a semi-autonomous team. An appointed craft committee for each specialty area served as an advisory group to the teaching team.

In the elementary and junior high schools, the students studied language arts, math, science, and social studies in relation to fifteen occupational clusters identified by leaders in the U. S. Office of Education (3). The instructional materials which were constructed by local school staff included career goals and objectives, concepts, student's learning activities, resources, and evaluation instruments. To fulfill the objectives, the teachers used a variety of teaching techniques such as individual and small group discussion, field trips, simulated work experience, role playing, projects, audio-visual aids to record field trips and students' actions, and other media.

EVALUATION OF THE ORANGE COUNTY PROJECT

Career education is a recent innovation in Florida schools. As in innovative programs in the past, predictions of success are heard from educators who favor the concept while predictions of failure are prevalent among those who disfavor the concept. Conducting existing educational programs yield high returns to American citizens and the society. New and different techniques in educational programs may or may not yield higher returns than existing programs. Thus, the American taxpayer demands some proof of reasonable evidence why a "new way" should be implemented and supported with his tax dollars. A means of measurement must be applied to provide this evidence. The logical approach to measuring the effectiveness of a program is a process of measuring the services offered and the students' achievement in new innovative career education as compared to services offered and students' achievement in existing educational programs.

Objectives of the Project

The following objectives are drawn directly from the proposal which was submitted to the U. S. Commissioner of Education for funding under the provisions of Part D of the Vocational Education Amendments of 1968 (3).

Objectives:

The purpose of this proposal is to plan, implement, and evaluate a model comprehensive vocational education program for Career Development in grades K-12 in one metropolitan school district of Florida. The model will become the prototype for all school systems in the State if, upon evaluation, objectives and procedures are shown to have value.

Broadly stated process objectives of the proposed project are to provide:

--a broad occupational orientation at elementary and secondary school levels to increase student awareness of the range of options open to them in the world-of-work;

--work experiences, cooperative education and similar on-the-job training programs, in addition to those currently available, making possible a wide variety of offerings in many occupational areas;

--specific training in job entry skills for students just prior to the time they leave school (some of these programs may be intensive and of short duration);

--intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling. (placement may be in a job, in post-secondary occupational programs, or in a 4-year college program);

--continued follow-up of all dropouts and graduates to provide information for program revision.

Specific objectives for students at various grade levels are:

For grade levels K-6

--to develop positive attitudes about the personal and social significance of work;

--to develop self-awareness and the ability to demonstrate an understanding of the attitudes, skills, interests, and talents necessary to related self-concepts of jobs;

--to develop and expand occupational awareness by participation in a variety of concrete career development activities so that the student understands the interdependency of occupations and the need to relate to and cooperate with others in the world-of-work;

--to improve overall performance by participation in a unified, action-centered, career-related curriculum.

For grades 7 and 8, specific student objectives are:

--to increase understanding by providing concrete and simulated experiences so that the student will explore broad clusters of occupations, evaluate interests, abilities, values, and needs as they relate to occupational roles;

--to provide opportunities for more detailed exploration of selected broad occupational clusters and to tentatively select a particular cluster for an in-depth study in grade nine;

--to improve overall performance by participation in a unified, action-centered, career-related curriculum

For grades 9 and 10, specific student objectives are:

--to provide in-depth exploratory and training experiences in one occupational cluster and to develop job entry level skills in one occupational area, leaving open the option to move between clusters;

--to improve overall performance by participation in a unified, action-centered, career-related curriculum;

For grades 11 and 12, specific student objectives are:

--to provide training experiences for intensive preparation in a selected occupational cluster, or in a specific occupation and to demonstrate job entry skills necessary for success in an occupation and/or further education;

--to increase the student's motivation to learn and thereby improve his performance in an action-centered, career-related curriculum.

Purpose of the Evaluation

The purposes of the evaluation were to ascertain answers to the following questions:

A. Did students in the career education programs as compared to students enrolled in traditional education programs:
   1. acquire more knowledge about careers?
   2. participate in more career related curriculum activties?
   3. demonstrate more productive work habits and positive attitudes?
   4. experience greater motivation and improved overall performance?
   5. learn more entry level job skills?
   6. receive more:
      a. career related instruction
      b. guidance service

B. Did more students in the career education programs express an interest in a career choice than students in traditional programs?

Definitions of Terms

For the purpose of evaluating the career education program, the following terms are defined:

achievement -- student progress toward the over-all goals of an educational program.

attitudes -- individual reactions to the experiences of a person's world, expressed as for, against, or indifferent to concepts included in a measuring instrument.

career education -- elementary and secondary programs with instruction fused into the existing curriculum to enable students to become aware of, explore, and prepare for careers.

career education students -- groups of students randomly selected, for evaluation purposes, from schools which participated in the career education project.

career exploration -- instruction with specific written objectives to enable students to explore the preparation, job requirements, working conditions, rewards, advancement and opportunities in one or more occupations people presently pursue as careers.

career orientation -- instruction with specific written objectives to orient students to one or more different occupations which people presently pursue as careers.

career related curriculum -- instruction with written objectives to provide students career awareness, career orientation and exploration, occupational awareness, occupational orientation and exploration and entry level job skills.

comparison group students -- groups of students randomly selected, for evaluation purposes, from schools which did not participate in career education but were comparable to schools which did participate in the career education project. The comparison schools were selected as comparable to career education schools on the basis of socioeconomic levels of the community, location, facilities, and grade point average of students.

entry level job skills -- knowledge, skills, and attitudes effective enough to gain employment and begin a career in an occupational area.

individual vocational counseling -- a one student-one counselor session involving a qualified vocational counselor and a student, with provisions to enable a student to engage in the problem solving decision making process regarding the identification and selection of an occupational or a vocational goal.

interest in an occupation -- a student's expressed preference for an occupational field as evidenced by a counselor.

group vocational counseling -- an interactive counseling structure involving a qualified vocational counselor and several students with provisions for students to engage in the problem solving decision making regarding the identification and selection of an occupational or vocational goal. Peer relationships and association are a part of the process.

manipulative-type job skill -- psychomotor skills necessary for entry level success in a specific occupation.

math skills -- arithmetic skills in prob'em solving and computation in basic processes and in everyday problems.

occupation -- a work activity that serves as one's source of livelihood.

personal-social traits -- specific characteristics of an individual and clusters of his behavior which are required to acquire and hold a job.

reading skills -- understanding the meaning of sentences and paragraphs containing a variety of content with emphasis on everyday adult life and activities.

realistic career choices -- the formulation of career expectations that are consistent with interests and abilities that could potentially result in occupational choices.

salable skills -- physical and mental skills which are required of an individual to perform in a payroll job.

school attendance rate -- the ratio of the number of days a student attended school during the regular school year to the total number of days school was in session.

school drop-out rate -- the number of students who leave school before completing the program.

self-concept -- the beliefs, attitudes, and opinions which an individual holds about himself with an emphasis on the relationship between the individual's changing perceptions of himself and a meaningful career.

student performance objectives (measurable) -- a description of the kind of performance that will be expected at the end of the instructional unit and at the end of the course, the teaching vehicle used as criteria for success.

traditional programs -- an educational program which has been followed continuously and has generated time honored educational practices or curriculum.

vocational courses -- systematically structured blocks of instruction to teach knowledge, skills, and attitudes necessary for entry level employment.

Limitations of the Study

The study was limited to the extent that the instruments were valid, that the professional integrity of the teachers, counselors, administrators, and evaluation coordinator was upheld and the students performed at their best on written exams. The study was further limited to the extent that students selected for the comparison group met the same criteria as students in the career group.

Establishing communication within the project schools, coordination of the evaluation with schools from which comparison students were selected, and coordination with the county data processing center created limitations for the study.

The purpose of the evaluation was to assess the effectiveness of the total career education program in Orange County which consisted of six elementary schools, three junior high schools, and one high school. The career education group consisted of a random sample of students from the project schools. Teacher participation in the elementary and junior high schools was voluntary during the first two years of the program and the project staff indicated that career education did not receive participation by all of the teachers. Under these conditions it was possible that all of the elementary and junior high school students were not exposed to career education. Since there is no assurance that all students in the career education program did receive career education, it would be logical to expect only small differences in achievement between groups of students in career education project schools and groups of students in comparison schools.

METHOD OF STUDY AND SOURCE OF DATA

Evaluating school programs is no simple task by anyone's imagination. The process of identifying exact quantitative values of hours of instruction, counseling, the number and length of different courses, the space, man hours, and student enrollment seems to be an impossible task for school administrators. The process of identifying academic achievement and other qualitative values is even more difficult. While measuring manipulative skills is somewhat a science, measuring cognitive knowledge is performed with indicator scales and the measurement of attitude and affective type learning can only be done with remote indicators at best. In the early planning stages of this evaluation, a group of professionals in the field of education were contacted as consultants* for the planning, conducting, and reporting stages. Periodic conferences with the consultants produced suggestions which proved to be valuable and time saving for all stages of the investigation.

Since very few studies have been conducted which were designed to measure the achievement of program process objectives and student product objectives, valid instruments to measure achievements in career education were difficult to identify. Three instruments available from commercial vendors were used and eight instruments were developed to gather the data for the evaluation**. The design provided for pre and post testing. All instruments were forwarded to the Orange County School Board for approval before use.

Data for the study were collected from students, teachers, counselors, and administrators. The chief administrator in the career education center designated one staff member responsible for coordinating and collecting evaluation data for the UWF investigator.

The evaluation coordinator in Orange County forwarded names of the students enrolled in the career education program to the UWF evaluator. Fifty names and fifteen alternates were randomly selected from the high school level group, 120 names were randomly selected from the junior high school group, and forty names were randomly selected from each of grades one through six as the elementary groups. The comparison groups were selected in the same manner. Comparison students were selected from other Orange County schools similar to the career education program schools e.g., socioeconomic level of the community, location, facilities, and grade point average of the students. The evaluation coordinator then identified teachers of these students and sent their names to the UWF investigator. The teachers' names were then typed on instruments containing information about teaching techniques and forwarded to the

---

*See Appendix B for List of Consultants.

**See Appendix C for Instruments Used to Collect Data for the Study.

evaluation coordinator for data collection. Students' names were typed on written examination and attitude inventories and forwarded to the evaluation coordinator to be administered to the students. In a like manner, information about students' personal-social traits and work habits was collected from teachers. Information about vocational counseling and occupational choice was gathered from counselors. Information about career and related course offerings was collected by the evaluation coordinator from the chief administrator of schools having participating students.

Data returned to UWF were edited for accuracy, coded and stored in memory on the computer disc pack. Computer programs were developed to compute the mean score, standard deviations, Fisher's t, the analysis of variance, and Chi Square for data analysis. The computer print-out of the statistical analysis, input data and student names was verified by the UWF staff. A copy of this information was then sent to the director of the career education program.

The following hypotheses served as guides for the evaluation:

A. High school level grades 9-12
   1. Students in the career group (E) as compared to students in the comparison group (C) will:
      a. learn more entry level job skills
      b. gain more knowledge about careers
      c. demonstrate more positive attitudes toward employment
      d. enroll and complete more instruction in career related curriculum activities and job skill training
      e. experience greater motivation and improved overall performance
   2. More students in the career group (E) will express an interest in a career than students in the comparison group (C).

B. Junior high school level grades 7-9
   1. Students in the career group (E) as compared to students in the comparison group (C) will:
      a. learn more entry level job skills
      b. demonstrate more productive work habits, traits, and attitudes
      c. learn more about career opportunities and requirements
      d. experience greater motivation and increased overall performance
      e. participate in more career orientation and exploration activities
   2. More students in the career group (E) will express an interest in a career than students in the comparison group (C).

C. Elementary school level grades 1-6

Students in the career group (E) as compared to students in the comparison group (C) will:

1. achieve more knowledge about careers, jobs, and occupations
2. demonstrate more positive attitudes toward the significance of man's work in our society
3. demonstrate more productive work habits, traits, and attitudes
4. demonstrate greater motivation and improved overall performance
5. participate in more career awareness curriculum activities

D. As a result of the career education program, students in the career group (E) as compared to students in the comparison group (C) will receive more:

1. career awareness instruction in the elementary grades
2. career orientation and exploration instruction in the junior high school grades
3. specific job skill training in the high school grades
4. individual and group guidance and counseling directed toward career choice

The research hypotheses were tested by accepting or rejecting the following null hypotheses:

H_o1: There is no significant difference between the career group (E) and comparison group (C) in high school grades 9-12 relative to:

1. number of entry level job skills developed
2. achievement in knowledge about careers
3. demonstrated positive attitudes toward employment
4. participation in career related curriculum activities
5. motivation and improved overall performance
6. the percent expressing an interest in an occupation

H_o2: There is no significant difference between the career group (E) and comparison group (C) in middle school grades 7-8 relative to:

1. the number of entry level job skills developed
2. demonstrated productive work habits, traits, and positive attitudes
3. achievements of knowledge about career opportunities and requirements
4. motivation and improved overall performance
5. participation in career related curriculum activities
6. the percent expressing an interest in an occupation

H_o3: There is no significant difference between the career group (E) and the comparison group (C) in the elementary school grades 1-6 relative to:

1. achievement of knowledge about careers, jobs, and occupations
2. demonstrated positive attitudes toward the significance of man's work in our society
3. motivation and improved overall performance

SAMPLE MODEL

Career Education Experimental † Group		Comparison ‡‡ Group	Design
$N_h = 50$		* MR $N_h = 50$	$O_1 X_1 O_2$
High School Level			
$N_m = 120$		MR $N_m = 120$	$O_1 X_1 O_2$
Middle School Grades 7-9			
$N_1 = 40$ $N_2 = 40$ $N_3 = 40$ $N_4 = 40$ $N_5 = 40$ $N_6 = 40$		MR $N_1 = 40$ $N_2 = 40$ $N_3 = 40$ $N_4 = 40$ $N_5 = 40$ $N_6 = 40$	$O_1 X_1 O_2$
Elementary School Grades 1-6		*S_s matched by selection criteria randomly selected subsamples	

† not intact classes

‡‡ not in same school with career education

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN ORANGE COUNTY, FLORIDA
1972-73 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	INSTRUMENT Title	INSTRUMENT Completed By	STATISTICAL TREATMENT
I HYPOTHESIS FOR PRODUCT OBJECTIVES				
A. Elementary Sch. Students (Grades 1-6)				
1. Students in the career group (E) as compared to students in the comparison group (C) will:				
a. achieve more knowledge about careers, jobs, and occupations	H_1: E-C > 0 H_o: E-C ≤ 0	What They Do (By Robbins & Newston)	Teacher & Student	t Test
b. demonstrate more positive attitude toward the significance of work	H_1: E-C > 0 H_o: E-C ≤ 0	FAIS	Teacher & Student	Frequency Count
c. demonstrate more productive work habits, traits, and attitudes	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1003	Teacher	Chi Square
d. demonstrate greater motivation and improved overall performance	H_1: E-C > 0 H_o: E-C ≤ 0	Summary of all data collected		
e. participate in more career orientation curriculum activities	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1002	School Admin.	Frequency Count

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN ORANGE COUNTY, FLORIDA
1972-73 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	INSTRUMENT Title	INSTRUMENT Completed By	STATISTICAL TREATMENT
B. Junior High Sch. Students (Grades 7-8-9)				
1. Students in the career group (E) as compared to students in the comparison group (C) will:				
a. learn more entry level job skills	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1001	Teacher	Percent
b. demonstrate more productive work habits, traits, and attitudes	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1003	Teacher	Chi Square
c. learn more about career opportunities and requirements	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1010	Student	t Test
d. experience greater motivation and increased overall performance	H_1: E-C > 0 H_o: E-C ≤ 0	Adult Basic Learning Exam UWF Form #1003	Student Teacher	Analysis of Variance Chi Square
e. participate in more career related curriculum activities	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1001	Teacher	Chi Square
2. More students in the career group will express an interest in a career choice than students in the comparison group.	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1005	Counselor	Percent

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN ORANGE COUNTY, FLORIDA
1972-73 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	INSTRUMENT Title	INSTRUMENT Completed By	STATISTICAL TREATMENT
C. High Sch. Students (Grades 10-12)				
1. Students in the career group (E) as compared to the comparison group (C) will:				
a. learn more entry level job skills	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1001	Teacher	Percent
b. achieve more knowledge about careers	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1001	Student	t Test
c. demonstrate more positive attitude toward employment	H_1: E-C > 0 H_o: E-C ≤ 0	My Work-My School-My Country	Student	Chi Square
d. enroll and complete more instruction in career related curriculum activities	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1001	Teacher	Percent
e. experience greater motivation and improved overall performance	H_1: E-C > 0 H_o: E-C ≤ 0	Adult Basic Learning Exam UWF Form #1008	Student Teacher	Analysis of Variance Percent
2. More students in the career group will express an interest in or make an occupational choice than students in the comparison group	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1005	Counselor	Percent

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN ORANGE COUNTY, FLORIDA
1972-73 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	INSTRUMENT Title	INSTRUMENT Completed By	STATISTICAL TREATMENT
II HYPOTHESES FOR PROCESS OBJECTIVES				
A. Students in the career group (E) as compared to students in the comparison group (C) will:				
1. receive more career orientation instruction in the elementary programs	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1002	School Admin.	Frequency Count
2. receive more specific job skill training in the secondary program	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1002	School Admin.	Frequency Count
3. receive more occupational orientation and exploration in the junior high school programs	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1002	School Admin.	Frequency Count
4. receive more individual and group guidance and counseling	H_1: E-C > 0 H_o: E-C ≤ 0	UWF Form #1005	Counselor	Frequency Count
B. There will be a greater number of students in the career group as compared to the comparison group placed in jobs or further educational programs through placement services.	H_1: E-C > 0 H_o: E-C ≤ 0	(To be constructed)	Counselor	

REVIEW OF RELATED RESEARCH

A comprehensive search of the literature reveals reports of several educational program evaluations. Most of these studies are the evaluators' subjective description of the program with conclusions and recommendations based on little or no objective data. In these evaluations, recommendations appear to be logical and sound, however, they are made without concrete supportive information. Some studies are similar in the design and procedure of this evaluation; the more recent ones are reported to establish some procedural validity of this evaluation.

The Harkness Center was established in Buffalo, New York, to provide the educationally disadvantaged youth with exploratory experiences in a series of different occupations. The students were scheduled for ten weeks of instruction in each occupation. At the end of each ten-week period, the teachers completed a checklist-type evaluation form to measure the students' progress. The instrument consisted of nine items which related to work habits and personal traits. The evaluation of the product objectives consisted of subjective observation by the teachers and administrators (4).

Wasden evaluated an exemplary program in Utah in which the purposes were to provide youth, in small rural high schools, skills to enter industrial occupations or preparation to continue education in post high school institutions. Industrial and agricultural mechanic educators combined efforts to reach the objectives. Additional purposes of the project were to: (a) provide leadership for local school administrators, (b) establish pilot programs, (c) provide a special teacher education program, and (d) help local school boards establish exemplary programs. Cooperation was received from teachers, industrial personnel, and parents. The evaluation consisted of (a) experimental and control groups, (b) pre and post tests, and (c) subjective observations by parents, school principals, and superintendents (5).

Darcey reported a project which was conducted by the faculty of Ohio University to develop programs in six central Ohio communities. The purposes of the project were to (a) identify teaching content to bridge the gap between school and work for junior and senior high school students, (b) explore the feasibility to offer a course in manpower and education, (c) write instructional materials, (d) develop a valid and reliable evaluation plan, and (e) field test the instructional materials. The evaluation consisted of students assigned to experimental and control groups, pre and post tests, and written exams. The instruments used were "Manpower Economics Test of Understandings" and "Survey of Manpower and Economic Attitudes" (6).

George Abner and C. R. Wright reported a one-teacher program for slow learning senior high school boys. The program was designed for those students who could not complete standard curriculum requirements for high school graduation. Cooperative experience in service type jobs was included while competition and threats for grades were removed. The evaluation procedure involved observing the achievements of the program objectives which were, in fact, fulfilled. Discipline problems, absenteeism, and tardiness disappeared and every participating student earned a job (7).

In a study to test the validity of programmed instruction against conventional techniques of teaching high school youth bookkeeping, Gibbs and others utilized the pre and post test design to measure the achievement of the experimental and control groups. Four classes of students were subjects of the evaluation with two classes randomly designated as experimental group which received the programmed instruction technique. The remaining two classes were designated as the control group which received conventional teaching techniques to achieve the same objectives. Statistical treatment to analyze the data consisted of the mean, standard deviation, and the t test (8).

Kraft conducted a survey-type evaluation of Vocational-Technical Education in Florida for the 1970-71 school year. Conclusions relative to vocational guidance, cost benefits, services for educationally disadvantaged persons, assessment of programs by employers and management information systems were based on the investigators' observations and analysis of limited data collected from the department of education, school directors, and some employers of vocational-technical graduates (9).

The Escarosa Humanities Curriculum Project (10) in Pensacola, Florida, was established for the purpose of developing the whole child through activities in music, drama, art, and literature. Specific objectives of the program were to help students improve their self-concept, academic performance, and attitude toward school; and to help Escambia and Santa Rosa County teachers integrate the humanities into the curriculum, increase their use of audio-visual aids and human resources, and increase their knowledge of the local heritage. The evaluation consisted of pre and post observation of the teachers and students, experimental group only, written exams, and checklist type information forms. The statistical treatment included mean scores, standard deviation, and Fisher's t test.

Delon (11) conducted an evaluation of computer assisted instruction in first grade math for economically and educationally disadvantaged McComb, Mississippi youth. Purposes of the investigation were to ascertain answers to the following questions: (a) What effects, if any, did the treatment have on achievement in mathematics and reading? (b) What effects, if any, did the treatment have on measured intelligence? (c) If the treatment produced significantly greater results than regular instruction, were the treatment differences maintained through the following year?

The design included (a) students randomly assigned to experimental and comparison groups in the project school, (b) comparison groups in a control school separate from the project school, (c) pre and post tests, and (d) a follow-up study of youth in the experimental group one year after they participated in the project. Standardized tests used to gather the data were the California Achievement Test, the Wechsler Intelligence Scale for Children, and the Otis-Lennon. The analysis of variance and t test techniques were utilized for data analysis.

A research design which included hypotheses testing and post test data was used to evaluate Florida's Vocational Exemplary Programs in 1970-71 (12). Data were collected from students, teachers, counselors, and administrators in exemplary and comparison schools in Dade, Duval, Escambia, and Hillsborough Counties relative to the student achievement in (1) manipulative-type salable job skills, (2) basic education skills, (3) attitudes, personal traits and work habits, and (4) school attendance and drop-out rate. Data were also collected relative to: (1) the student's expressed interest in an occupational choice, (2) the number of confrontations with law enforcement agencies by students in exemplary programs, (3) student enrollment in vocational related courses, (4) the amount of vocational and related instruction offered, (5) the amount of individual and group counseling received, and (6) instructional techniques utilized by teachers. The mean score, t test, Chi Square, and Mann-Whitney U statistical techniques were used to analyze the data. Three instruments were purchased from commercial publishers and five instruments were constructed to gather the data.

A comprehensive program of vocational education in a rural, economically depressed area is reported by Holstein (13). Specific features include the introduction of: (1) career awareness in grades 1-6, (2) career orientation activities in grades 7-8, (3) career exploration in grades 9-12, (4) intensified occupational guidance, counseling, and job placement activities, and (5) intensified skill development for students terminating their formal education. Project evaluation indicated that some teachers were having problems correlating existing disciplines with occupational study. This led to the recommendation that teachers use career education materials to supplement existing texts. Assessment of the model was through structured interviews, instruments yielding quantitative and qualitative measures of cognitive and affective characteristics and instruments yielding comparative profiles.

An exemplary program in occupational education in rural and urban Kansas school settings was evaluated by Kansas State University staff. The project was established in three locations: a small rural school district, a medium-sized suburban school district, and a large urban school district. Each setting demonstrates occupational awareness and orientation activities; cooperative education opportunities; intensive counseling and placement services. Quantitative, qualitative and product evaluations, as well as staff perceptions of the programs, was conducted. Kansas State University, through contractual agreement with the State Board of Education, performed such functions as in-service teacher training, teacher workshops, curriculum development and evaluation services (14).

The Work Experience Career Exploration Program (WECEP) in the Minneapolis public schools consists of a pre-vocational exploratory program designed for educationally disadvantaged ninth-grade students, emphasizing the cultivation of individual talents, development of social skills, and the recognition of the student as an individual with social economic worth. A post test only control group evaluation design was followed. The major finding of the evaluation was that the WECEP students showed significant improvement in behaviors and attitudes such as cooperation, completion of tasks, and pride in work (15).

In the Knoxville, Tennessee Contemporary Curriculum for Career Development career education is being taught in grades K-12 with one hundred percent student participation in grades K-8 and fifty-two percent participation in grades 9-12. Exploratory experiences, orientation programs, and skill training are provided along with a work-study program. Supportive services available to all students include guidance counseling, placement, follow-up and career orientation programs. Evaluation of the career education program will consider three major groups: students, teachers, and parents. Students will be measured for knowledge of occupations, change in interests, self-image, acceptance of responsibility, getting along with people, and development of work values. Teachers will be measured for knowledge of occupations, attitude and morale. Parents will be tested for attitudes, interests and participation. Student enrollment in vocational education will also be evaluated (16).

An interdisciplinary career assessment program in curriculum revision began in 1969 at Stanford High School (Connecticut) for the purpose of providing instruction relevant to the needs of eighty-six slow learners and disdavantaged youth. The cluster concept and correlation of classroom materials to occupational assessment and skill training were essential elements in the program. The program was designed to increase self-understanding and vocational exploration, to improve student adjustment to school, develop basic skills, motivate further education, and stimulate joint educational planning between the school and the community. Anecdotal records, questionnaires, surveys, and standardized tests were used to evaluate the program (17).

ACHIEVEMENT IN THE ELEMENTARY SCHOOLS
GRADES K-6

Career education instruction was integrated into the curriculum in ten schools in Orange County, Florida. Six elementary schools with approximately 4280 students were selected to participate in the project on the basis of their expressed desire and that they were feeder schools to the participating junior high schools which acted as feeder schools to the participating high school. The following six elementary schools located in various sections of the county with students representing a cross section of the total population participated:

School	Enrollment
Bonneville Elementary School	477
Killarney Elementary School	780
Lovell Elementary School	933
Columbia Elementary School	580
Hungerford Elementary School	350
Wheatley Elementary School	1160

Special project staff members assisted classroom teachers in planning, developing, coordinating, and conducting career awareness learning experiences in the elementary school programs.

The purpose of the evaluation was to ascertain answers to the following questions:

Did students in the elementary career education programs as compared to students in traditional programs:

1. achieve more knowledge about careers, jobs, and occupations?
2. demonstrate more positive attitudes toward the significance of man's work in our society?
3. demonstrate more productive work habits, traits, and positive attitudes?
4. demonstrate greater motivation and improved overall performance?
5. receive and participate in more career orientation curriculum activities?
6. receive more counseling service?

For the purpose of the evaluation, forty students were randomly selected from each of grades 1-6 in the career education schools as the career groups (E) while a comparison group (C) of forty students was randomly selected from each of grades 1-6 in traditional schools. Teachers of the career group and teachers of the comparison group were identified

and used as a source of information for the evaluation. The design included pre and post observation. Since analyses of pre-test treatment data indicate no difference between career and comparison groups at the beginning of the school year, only post-test data analyses are reported.

Knowledge about Careers. Two instruments labeled "What They Do" were constructed by the UWF Elementary Education faculty for the evaluation to gather information from elementary students relative to their knowledge about careers, occupations, and jobs (see Appendix C for instruments). One instrument was designed for students in grades 1, 2, and 3 and one instrument was designed for students in grades 4, 5, and 6. Both instruments were developed in schools similar to those in the career education program and were used in the 1971-72 Orange County Career Education Project Evaluation. The instrument for grades 1, 2, and 3 was designed for individual administration and includes ten major items with six "yes-no" type responses for each item. Responses were received from fifty-three students in the career group and seventy-two students in the comparison group. Computed mean scores of 52.98 for the career group and 50.13 for the comparison group and computed t-value of 0.13 comparing the mean scores indicated no difference between the groups relative to scores on the instrument. Standard deviations of 5.60 for the career group and 4.77 for the comparison group further indicate little difference between the groups.

The instrument for grades 4, 5, and 6 was designed to be administered to a group and includes fifteen major items with six "yes-no" type responses for each item. Sixty-four students in the career group and forty-seven students in the comparison group responded to the instrument. Computed mean scores of 71.47 for the career group and 74.02 for the comparison group and a t-value of -1.51 comparing the mean differences indicate no difference between the groups. Standard deviations equated to 7.85 for the career group and 7.34 for the comparison group. The data presented indicate that instruction in career related curriculum activities had no measured effect relative to students' scores on tests about careers, occupations, and jobs.

Positive Attitudes Toward the Significance of Man's Work in Our Society. Two instruments, "If I Were..." and "Were I A Worker...," were used to assess elementary students' feelings toward selected occupations in our society (see Appendix C for instruments). The instrument "If I Were..." was designed to collect data from students in grades 1, 2, and 3 relative to their feelings about being the following workers: a postman, a hair dresser, a T. V. newsman, a policeman, a secretary, a truck driver, a doctor, a carpenter, a singer, a service station attendant, a forest ranger, a garbage collector, a nurse, a teacher, a farmer, and an astronaut. The instrument included three pictorial facial expressions depicting sad, no emotions, and happy for each item. The student was instructed to mark an "X" through the facial expression which indicated his feeling as he pretended to be the worker described in each item with an action-type picture. Twenty-five students in the career

group and seventy students in the comparison group responded. Data were tabulated by frequency counts. Facial expressions were assigned numerical values (e.g., sad = 1; neutral = 2; and happy =3). Item mean scores were computed by multiplying cell frequencies by numerical values and dividing the product by the number of students responding to the item. Occupations were then ranked in order of mean score with "one" as the highest rank and "sixteen" as the lowest rank. The compiled data included in Table 1-1 indicate little difference between the groups relative to their feeling toward the occupations. While the career group assigned a wider range of values to different occupations, the comparison group discriminated less between occupations by assigning values with less range which could be interpreted as a positive outcome for the career group. Similar response by both groups were positive toward teachers, singers, and doctors while both groups responded equally negative to the hair dresser and the garbage collector. While the nurse and secretary were given more positive values by the comparison group, the T. V. newsman and service station attendant received more positive ratings by the career group. The career group assigned higher scores to ten of the sixteen occupations included in the instrument.

The instrument "Were I A Worker..." was designed for students in grades 4, 5, and 6 to express their feelings toward being the following workers: a barber, a telephone operator, a poultryman, a T. V. repairman, an X-ray technician, a hospital attendant, a typist, a store owner, a waitress, an architect, the governor, an auto mechanic, a cartoonist, an insurance salesman, a landscape gardener, and a T. V. newsman. Each occupation was presented with action-type pictorial illustration and included ten semantic differential type responses for each occupation. Sixty-five career students and seventy-seven comparison students responded to the instrument.

Data were tabulated by frequency counts. Numerical values were assigned to each response and a mean score was computed for each group by occupation. Occupations were then ranked in order of mean score with "one" as the highest and "sixteen" as the lowest rank. The tabulated data, included in Table 1-2, indicate no difference between the groups relative to their response to the instruments. Both groups rated the store owner highest and the auto mechanic and landscape gardener lowest with very little difference between the groups' response to the remaining occupations included in the instrument.

Participation in Career Related Curriculum Activities. Program designers in the Orange County Career Education Project hypothesized that students enrolled in the career program would participate in more career related curriculum activities than students in the comparison group.

Data reported relative to career education offered to students in the six schools participating in the project are included in Table 1-3. All six of the project schools reported offering integrated instructional units with career orientation objectives. Only one school which the comparison students attended reported offering career related

TABLE 1-1
OCCUPATIONS RATED BY CAREER AND COMPARISON GROUP
ELEMENTARY STUDENTS RELATIVE TO THEIR FEELINGS
OF HAPPY, NEUTRAL, AND SAD

(As measured by "If I Were...")

Occupation	Mean Scores		Rank of Occupations		Number of Schools/Participants	
	Career	Comp.	Career	Comp.	Career	Comp.
Postman	2.25	2.05	9	11	3/25	5/70
Hair Dresser	1.80	1.83	15	15	3/25	5/70
T. V. Newsman	2.36	2.01	7½	12	3/25	5/70
Policeman	2.44	2.22	6	6	3/25	5/70
Secretary	1.96	2.23	14	5	3/25	5/70
Truck Driver	2.16	1.87	10½	14	3/25	5/70
Doctor	2.80	2.27	2	4	3/25	5/70
Carpenter	2.12	1.88	12	13	3/25	5/70
Singer	2.88	2.41	1	2	3/25	5/70
Service Station Attendant	2.48	2.65	4½	10	3/25	5/70
Forest Ranger	2.48	2.36	4½	3	3/25	5/70
Nurse	2.04	2.21	13	7	3/25	5/70
Garbage Collector	1.50	1.70	16	16	3/25	5/70
Teacher	2.56	2.56	3	1	3/25	5/70
Farmer	2.16	2.17	10½	8	3/25	5/70
Astronaut	2.36	2.13	7½	9	3/25	5/70

TABLE 1-2
OCCUPATIONS RATED BY CAREER AND COMPARISON GROUP
ELEMENTARY STUDENTS RELATIVE TO THEIR FEELINGS
OF EXCITEMENT, IMPORTANCE, AND LEADERSHIP

(As measured by "Were I A Worker...")

Occupation	Mean Scores		Rank of Occupations		Number of Schools/Participants	
	Career	Comp.	Career	Comp.	Career	Comp.
Barber	2.31	2.34	12	11	4/65	5/77
Telephone Operator	2.43	2.41	9	10	4/65	5/77
Poultryman	2.29	2.09	14	14	4/65	5/77
T.V. Repairman	2.31	2.30	13	13	4/65	5/77
X-Ray Technician	2.55	2.59	5	3	4/65	5/77
Hospital Attendant	2.66	2.53	3	6	4/65	5/77
Typist	2.40	2.46	10	9	4/65	5/77
Store Owner	2.68	2.70	1	1	4/65	5/77
Waitress	2.33	2.31	11	12	4/65	5/77
Architect	2.47	2.55	7	5	4/65	5/77
Governor	2.51	2.50	6	8	4/65	5/77
Auto Mechanic	2.07	2.09	16	15	4/65	5/77
Cartoonist	2.67	2.56	2	4	4/65	5/77
Insurance Salesm.	2.43	2.51	8	7	4/65	5/77
Landscape Gardner	2.13	2.04	15	16	4/65	5/77
T.V. Newsman	2.64	2.65	4	2	4/65	5/77

TABLE 1-3
CAREER RELATED INSTRUCTION OFFERED IN SIX ELEMENTARY SCHOOLS
IN THE ORANGE COUNTY CAREER EDUCATION PROJECT
DURING THE 1972-73 SCHOOL YEAR

(As measured with "Program Inventory" - UWF Exemplary Form #1002)

INSTRUCTION (as reported by the school principal)	Hours of Instruction Offered by School					
	Bonne-ville	Killarney	Lovell	Colum-bia	Hunger-ford	Wheatle
Communication Careers	15	85				
Telephone		20	32	48		40
Vegetable Farming		70	18			10
Newspaper	15	25	21	15	60	
Citrus Careers		30	7		45	18
Food Services	48	25	6	50		
Dairy Industry		25				
Airport		50	30	45		32
Police Workers	40	45	14	70		31
Pottery Making	20	70	6			
Woodworking	36	20	6	30	60	117
Supermarket		25				
Astromony		65				
Manufacturing		20			35	
Planning a City	40					40
Pet Care	14		12	14		60
Zoo Workers	6		5			5
Craft Careers	30		20	15	50	
Hospital Workers	60		18		40	36
Transportation			9	50		24

TABLE 1-3 (cont.)
CAREER RELATED INSTRUCTION OFFERED IN SIX ELEMENTARY SCHOOLS
IN THE ORANGE COUNTY CAREER EDUCATION PROJECT
DURING THE 1972-73 SCHOOL YEAR

(As measured with "Program Inventory" - UWF Exemplary Form #1002)

INSTRUCTION (as reported by the school principal)	Hours of Instruction Offered by School					
	Bonneville	Killarney	Lovell	Columbia	Hungerford	Wheatley
Department Store Managers				21		
Hotel-Motel Careers			10	15		60
Child Care					30	
Forestry Careers			6		35	
Animal Farming Career					25	
Workers at School			8			
Clothing Industry			8			
Poultry Farming			14			64
Hosts and Hostesses			8			
Conservation Careers			5			
Elementary Teachers			6			
Bakery Career			6			
Florists			5			
Post Office Workers			12			6
Firemen			14			
Decision Making						12
Commercial Fishing Careers						12
Commercial Recreation Careers						16
Shoe Repair						30
Beauty Culture						16

instruction. The exact numbers were not available relative to career and comparison students participating in career related instruction. However, it is logically assumed that there was more participation in career related curriculum activities by the students in the career programs since students in the comparison group were offered much less career related instruction. From the information presented, students in the career group did receive and participate in more career related curriculum activities.

Attendance Rate. Attendance rate was considered as one indicator of greater motivation and improved overall performance. Attendance data were collected from the students' permanent records at the end of the school year. An attendance rate was computed for each student as the ratio of the number of days present to the number of days school was in session. Mean scores of .93 for the career group and .95 for the comparison group were computed and a t test was conducted comparing the attendance by the two groups. A computed t-value of -0.98 indicated no difference between groups on school attendance rate.

Productive Work Habits. The teachers of career and comparison groups were asked to complete the "Personal-Social Traits Inventory" - UWF Form #1003 (see Appendix C for Instruments) on each student in the sample. There were 240 students in each sample. Completed instruments were returned for 1970 career students and none for the comparison group. Absence of data from the comparison group did not permit statistical analysis to compare response of the two groups.

Counseling Service. The information form "Guidance Inventory" - UWF Form #1005 for recording and reporting group and individual counseling sessions and the students' expressed interest in career choice was forwarded to the evaluation coordinator who in the process forwarded it to the appropriate staff member for data collection (see Appendix C for instruments). Information was returned for sixty-one of 240 students in the career group and one student in the comparison group. Students in the career group received thirty-five hours of individual counseling and thirty-one hours of group counseling. The counseling data received on the sixty-one students in the career group indicated that all of these students expressed an interest in a career sometime during the school year. No students in the comparison group were reported to have expressed interest in a career.

Summary of Findings. Students in the career group did receive and participate in more career awareness and orientation curriculum activities than students in the comparison group.

There was no significant difference between the career and comparison groups relative to scores on the tests used to measure knowledge about careers.

Data relative to attitudes toward the significance of man's job in our society indicated no significant difference between the groups.

Career students responded no differently than comparison students toward the importance, leadership, and excitement of workers.

Sixty-one students in the career group received counseling while one of the students in the comparison group received counseling.

While sixty-one career group students expressed an interest in a career, there were no data reported that any student in the comparison group expressed an interest in a career.

There was no difference between groups relative to school attendance rate.

Conclusions. To the extent that the instruments were valid, the data reliable and complete, and students selected for the career and comparison groups met the same criteria, the data suggest the following conclusions:

> Students attending the career programs as compared to students attending comparison programs would be expected to:
> 1. receive and participate in more career orientation and awareness instruction.
> 2. demonstrate no difference on instruments used to measure knowledge about careers.
> 3. receive more counseling service.
> 4. demonstrate no difference on response to instrument used to measure attitudes toward the significance of man's work in our society.
> 5. respond no differently toward the importance, leadership, and excitement of workers.
> 6. demonstrate no difference on overall performance as indicated by school attendance rate response to instruments to measure knowledge about careers and response toward the importance, leadership, and excitement of workers.

ACHIEVEMENT IN JUNIOR HIGH SCHOOLS GRADES 7, 8, AND 9

Career exploration was included in the curriculum in Apopka Junior High School, Winter Park Junior High School, and Union Park Junior High School by integrating instructional units and learning packages into the instructional program. The teaching faculty constructed the materials with assistance from the career education project staff. The three schools enrolled approximately 3320 students in grades 7, 8, and 9. More than sixty percent of the students were white. The building space appeared to be inadequate for the career exploration instruction conducted by the staff even though the buildings and facilities were clean, well maintained, and in good repair. For the purpose of the evaluation, 120 students were randomly selected as the career group while a comparison group of 120 students was randomly selected from three other junior high schools with student bodies, services, and facilities similar to the career schools.

The purpose of the evaluation was to ascertain answers to the following questions:

A. Did students in the junior high school career education programs as compared to students in traditional comparison programs:
   1. learn more entry level job skills?
   2. demonstrate more productive work habits, traits, and attitudes?
   3. learn more about career opportunities and preparation requirements?
   4. experience greater motivation and improved overall performance?
   5. participate in more career related curriculum activities?
   6. receive more counseling service?

B. Did more students in the career education group express an interest in a career than students in comparison programs?

Entry Level Job Skills. Information relative to entry level job skills was collected from teachers of career and comparison students with the UWF Form #1001 - "Course Inventory" (see Appendix C for instruments). The teachers in courses with career education objectives were asked to list their performance objectives on the information form and rate the achievement of the designated students. Data included in Table 2-1 depicts information returned from teachers of career and comparison students. The data indicate that 32.5% of the career group

TABLE 2-1

RESPONSE BY TEACHERS OF STUDENTS IN CAREER AND COMPARISON GROUPS IN GRADES 7, 8, AND 9 RELATIVE TO ENTRY LEVEL JOB SKILLS ACHIEVED IN ORANGE COUNTY DURING THE 1972-73 SCHOOL YEAR

(As measured with "Course Inventory" - UWF Exemplary Form #1001)

	Group			
	Career		Comparison	
Sample Size and Instruments	Number	Percent of Sample Size	Number	Percent of Sample Size
Sent Out to Teachers	120	100.0%	120	100.0%
Instruments Returned	69	57.5%	95	79.2%
Instruments Returned:				
1. with objectives and usable data	39	32.5%	32	26.6%
2. without objectives	30	25.0%	63	52.5%
Students Reported as Achieving:				
1. 1-4 Entry level job skills	26	21.7%	27	22.5%
2. 5-9 Entry level job skills	12	10.0%	5	4.2%
3. 10 or more entry level job skills	1	.8%	0	0.0%
Students with no Reported Achievements of Entry Level Job Skills	81	67.5%	88	73.3%

and 26.7% of the comparison group participated in skill development career related activities. While 10.8% of the career group achieved five or more entry level job skills, only 4.2% of the comparison group achieved five or more entry level skills. Students in the career group achieved more skills than students in the comparison group. The skill development component of career education in grades 7, 8, and 9 served only one-third of the students. Data further indicate this by the fact that 67.5% of the career students had no reported data which would indicate any skill achievement.

Productive Work Habits, Traits, and Attitudes. In an attempt to collect information about students in the career and comparison groups, teachers were asked to respond to the UWF Form #1003 - "Personal-Social Traits Inventory" (see Appendix C for instruments). The instrument was constructed for teachers of career students to rate career students and teachers of comparison students to rate comparison students against the twenty-one items relating to work habits and personal-social traits. Such an instrument could have inherent reliability weakness.

TABLE 2-2
CAREER RELATED INSTRUCTION OFFERED TO STUDENTS
IN THE CAREER AND COMPARISON PROGRAMS
DURING THE 1972-73 SCHOOL YEAR

(As measured with "Program Inventory" - UWF Exemplary Form #1002)

Career Programs Instruction (as reported by school principals)	Grade Level	Length of Inst. in Hours
Orientation	*	15
Careers in Commercial Aviation	8	55
Careers in Telephone Industry	8	20
Careers in Conservation	7	38
Hospital Careers	7	48
Careers in the Military Service	*	12
Home Economics	8	90
Work Experience	*	90
Career Exploration in Radio and T. V.	7	110
Politics Offers Careers	9	40
Careers in Banking	9	10
Careers in Food Preservation	9	15
Careers in Hotel-Motel Management	*	10
Project Go	9	10
Social Work Child Care	*	9
Communications	*	28
Retailing	7	10
Air Force Careers	8	29
Newspapers as a Career	7	32
Photography as a Career	7	*

*Data not reported

TABLE 2-2 (cont.)
CAREER RELATED INSTRUCTION OFFERED TO STUDENTS
IN THE CAREER AND COMPARISON PROGRAMS
DURING THE 1972-73 SCHOOL YEAR

(As measured with "Program Inventory" - UWF Exemplary Form #1002)

Career Programs Instruction (as reported by school principals)	Grade Level	Length of Inst. in Hours
World of Work	8	*
Careers in Computers	7	11
Careers in Law Enforcement	8	*
Careers in Home Building	*	*
Food Service Careers	*	*
Forestry as a Career	*	*
The Citrus Industry	*	*
Comparison Programs Instruction (as reported by school principals)	**Grade Level**	**Length of Inst. in Hours**
Agriculture Science	8	90
Manufacturing	8	90
Typing	8,9	180
Home Economics	7,8	180
Industrial Arts	9	180
Drafting	9	180
Home Economics (Nutrition-Foods)	9	90
Home Economics (Textiles-Clothing)	9	90
Careers in Marketing	8,9	90
Careers in Retailing	8,9	90
Special Education EMR	*	180
Work Experience	*	180

*Data not reported

In the career group, teachers completed the instrument on each of seventy-six students; and in the comparison group, teachers completed the instrument on seventy-nine students. A Chi Square was calculated on each of the items with differences significant at the .05 confidence level on only one item which favored the comparison group. Since this difference was very small in comparison to the total number of items on the instrument, the difference between the groups relative to the measures was considered negligible.

Knowledge about Careers. Eighty-seven students in the career group and seventy-six students in the comparison group responded to the "Career Inventory" - UWF Form #1010 (see Appendix C for Instruments). The instrument was constructed and developed to measure knowledge about careers for the Orange County career project. Data collected with the twenty-one item multiple-choice type instrument were tabulated and treated with a t test comparing the mean scores of each group. A mean score of 15.74 for the career group and 15.57 for the comparison group and a t-value of 0.271 indicate no difference between the groups relative to their scores on an instrument designed to measure knowledge about career opportunities.

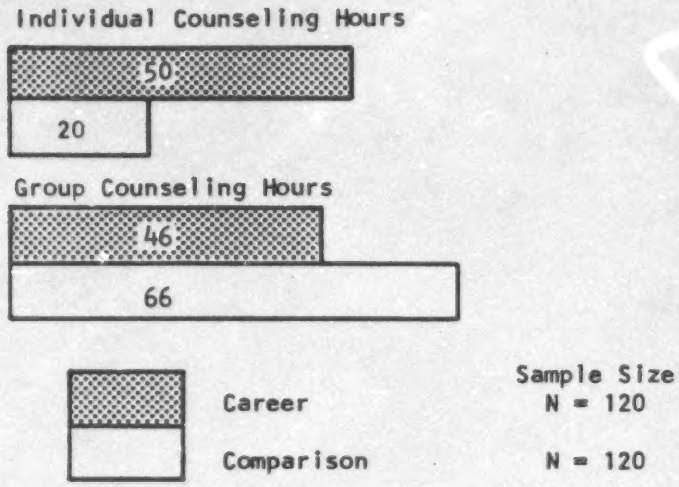
Career Related Curriculum Activities. One hypothesis of the career project was that more students in the career group would participate in more career related curriculum activities than students in the comparison group. Data were gathered with the "Course Inventory" - UWF Form #1001 and "Program Inventory" - UWF Form #1002 (see Appendix C for Instruments) and relative to the instruction offered with career related objectives and student participation. Tabulated data are included in Table 2-2.

Students in the career group were offered a greater variety of career related instruction than students in the comparison group. While all three schools attended by career students offered career related instruction, only two of three schools attended by comparison students offered courses with career education objectives.

More students in the career group participated in career related instruction. Instruments were sent to Orange County for collecting data on 120 students in each sample. Information returned indicated that fifty-seven career students, 47.5%, were participants in career related laboratory-type instruction while in the comparison group twenty-one students, 17.5%, were reported as participants in programs which had written objectives directed toward career orientation outcomes. Administrators of the career education programs indicated that all students in the career programs participated in some type of career related instruction.

Attendance Rate. Attendance rate was considered as one indicator of greater motivation and improved overall performance. Data were collected at the end of the school year relative to the total number of days each student attended during the school year. The ratio of days attended to the total number of days school was in session was computed as the attendance rate. Computed mean socres of .86 for the career group

FIGURE 2-1
HOURS OF COUNSELING RECEIVED
BY JUNIOR HIGH SCHOOL CAREER AND COMPARISON GROUPS
IN ORANGE COUNTY
1972-73 SCHOOL YEAR



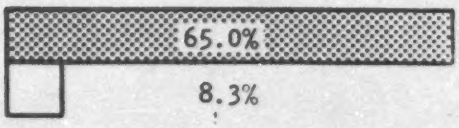
and .93 for the comparison group and a test which yielded a t-value of -43.16 favored the comparison group. The data indicate that the comparison group demonstrated an attendance rate which was significantly higher than that of the career group.

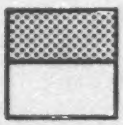
Counseling Service. Counseling information forms (UWF Form #1005, see Appendix C for Instruments) for recording counseling session and the student's expressed interest in a career were forwarded to the counselors for data collection. The tabulated data in Figure 2-1 represents hours of counseling received by the career and comparison group students during the school year. During the process a higher percent of students in the career group received individual counseling while a higher percent of comparison students received group counseling. Sixty-five percent of the students in the career group expressed an interest in a career; only 8.3% of the comparison group indicated an interest in a career (see Figure 2-2).

Summary of Findings. In the career group, 32.5% of the students participated in skill development career related activities and 10.8% achieved five or more entry level job skills which was greater than achievement by students in the comparison group.

Career group teachers rated their students no different than comparison teachers rated comparison students on productive work habits, traits, and attitudes.

FIGURE 2-2
EXPRESSED INTEREST IN AN OCCUPATION
BY JUNIOR HIGH SCHOOL CAREER AND COMPARISON GROUPS
IN ORANGE COUNTY
1972-73 SCHOOL YEAR





	Sample Size
% of Exemplary Sample	N = 120
% of Comparison Sample	N = 120

Data indicate no difference between the career and comparison groups relative to scores on an instrument designed to measure knowledge about careers.

Students in the career group were offered a greater variety of career related instruction than students in the comparison group. More students in the career group participated in career related curriculum activities.

Data indicate that comparison group students demonstrated a school attendance rate which was significantly higher than the attendance rate by the career group.

Career group students received more individual counseling than comparison group students. Comparison group students received more group counseling than career group students.

More students in the career group expressed an interest in a career than did students in the comparison group.

Conclusions. To the extent that the instruments were valid, the data reliable and complete, and students selected for the career and comparison groups met the same criteria, the following conclusions are implied:

> Students participating in the career education project in grades 7, 8, and 9 as compared to students participating in traditional academic school programs would be expected to:

1. learn more entry level job skills.
2. receive and participate in more career related curriculum activities.
3. score no differently on instruments designed to measure knowledge about careers.
4. rate no differently on productive work habits, traits, and attitudes.
5. receive more individual counseling and less group counseling.
6. demonstrate no differently on overall performance.

More students in the career project would be expected to express an interest in a career than students in traditional school programs.

ACHIEVEMENT IN THE HIGH SCHOOL PROGRAM
GRADES 9-12

The Wymore Vocational-Technical Center was converted into a career education high school to serve as an integral part of the Orange County Career Education Project for grades K-12. Instruction in sixteen specialization areas made up the section of the curriculum which offered students entry level job skill preparation while the balance of the curriculum consisted largely of language arts, math, science, and social studies which were related to the areas of specialization. The teaching staff was divided into teams consisting of two laboratory teachers, two academic teachers, one counselor, and one teacher aide for each area of specialization. The teams, in cooperation with the staff curriculum writer, constructed teaching materials to fulfill the career education objectives. The campus is centrally located in the county, the buildings are in need of some repair, the facilities appear to be adequate for the activities conducted during the past school year, and there is available land for future expansion. The school enrolled approximately 500 students in grades 9-12, approximately sixty percent were white and forty percent black.

For evaluation purposes, fifty students and fifteen alternates in the career group were randomly selected while fifty students and fifteen alternates were randomly selected as the comparison group from students meeting the same criteria as the career students. Students in the comparison group attended school separate and apart from Wymore Vocational-Technical Center. Data were collected from administrators, teachers, counselors, and students for evaluating the effectiveness of the career program.

The purpose of the evaluation was to ascertain answers to the following questions:

A. Did students in the senior high school career education program as compared to students in comparison programs:
   1. learn more entry level job skills?
   2. gain more knowledge about careers?
   3. demonstrate more positive attitudes toward employment?
   4. participate in more instruction in career related curriculum activities?
   5. experience greater motivation and improved overall performance?
   6. receive more counseling service?

B. Did more students in the career education program express an interest in a career choice than students in comparison programs?

TABLE 3-1
RESPONSE BY INSTRUCTORS OF STUDENTS IN CAREER AND COMPARISON GROUPS IN GRADES 10, 11, AND 12 RELATIVE TO ENTRY LEVEL JOB SKILLS ACHIEVED IN ORANGE COUNTY DURING THE 1972-73 SCHOOL YEAR

(As measured with "Course Inventory" - UWF Exemplary Form #1001)

	Group			
	Career		Comparison	
Sample Size and Instruments	Number	Percent of Sample Size	Number	Percent of Sample Size
Sent Out to Teachers	65	100.0%	65	100.0%
Instruments Returned	63	96.9%	59	90.8%
Instruments Returned:				
1. with objectives and usable data	36	55.4%	18	27.7%
2. without objectives	27	41.5%	41	63.1%
Students Reported as Achieving:				
1. 1-4 entry level job skills	18	27.7%	18	27.7%
2. 5-9 entry level job skills	7	10.8%	0	0.0%
3. 10 or more entry level job skills	11	16.9%	0	0.0%
Students with No Reported Achievements of Entry Level Job Skills	29	44.6%	47	72.3%

Skills and Knowledge. Information relative to entry level job skills for senior high school students was collected from the teachers of both career and comparison students. The teachers were asked to write performance objectives for their programs and rate the designated students against the objectives (see Appendix C, "Course Inventory").

The criterion utilized in establishing the effectiveness of instruction relative to salable skills in both the career and comparison groups was the subjective evaluation of the instructor. Objectives were varied both within and between groups. A number of instructors did not specify any objectives.

Tabulated data returned are included in Table 3-1. Information forms with performance objectives were returned on 55.4% of the career group and 27.7% of the comparison group. There were no data returned to indicate any skill achievement by 44.6% of the career students and 72.3% of the comparison students. While 27.7% of the career group achieved

five or more entry level job skills, there were no students in the comparison group who performed at this level.

Knowledge about Careers. The "Career Inventory" - UWF Form #1010 (see Appendix C for Instruments) was constructed for the Orange County Career Education Project to measure the students' knowledge about careers, job opportunities, entrance requirements, preparations, rewards, and benefits. Thirty-three students in the career group and thirty-three students in the comparison group responded to the twenty-two item multiple-choice type instrument. Computed mean scores of 16.55 for the career group and 17.25 for the comparison group and a t-value of -0.151 indicated that there was no statistically significant difference between the groups relative to their performance on a test designed to measure their knowledge about careers.

Attitudes Toward Employment. The instrument "My Work-My School-My Country" (see Appendix C for Instruments) was administered to career and comparison group students in an effort to measure attitudes, employment, and the contribution of man's work in our society. In the career group, thirty-two students completed the thirty-seven item "agree-disagree" type instruments while thirty-three students in the comparison group responded. Data from the two groups were compared by treating the scores with a Chi Square for each of the thirty-seven items included in the instrument comparing response of the career group with response of the comparison group.

Chi Square values, significant at the 0.05 confidence level, indicated a difference between the groups on four items. The career group scored more positive toward "school" and the "contribution of work in our society."

Career Related Curriculum Activities. One purpose of the study was to ascertain an answer to the question: Did students in the career group participate in more career related curriculum activities than students in the comparison group? Information collected from teachers of both groups with the UWF Form #1001 (see Appendix C for Instruments) revealed that a total of forty students, 61.5%, in the career group participated in laboratory-type career related instruction while eighteen students, 27.7%, in the comparison group participated in instruction with written objectives directed toward careers. Administrators reported that all students in the career education program participated in career education activities.

Information relative to career related instruction offered in career and comparison programs was collected from school administrators with the UWF Form #1002 (see Appendix C for Instruments). Students in the career program were offered instruction in the following fifteen vocational courses:

Cabinetmaking	Automobile Mechanics
Electricity	Small Engine Repair
Carpentry	Horticulture
Masonry	Sewing Trades
Retailing	Food Service
Business Education	Vocational Music
Child Care	Building Maintenance
Health Occupations	

Schools attended by comparison group students offered courses in the following ten areas with the length varying from eighteen to 540 hours:

Industrial Arts	Work Experience Programs
Home Economics	Art Education
Business Education	Health Occupations
Distributive Education	Agriculture
Auto Mechanics	Earn and Learn

More instruction related to careers was offered to students in the career group than students in the comparison group.

Instruction offered in the career education program was limited to skill level training programs with the exception of the health related programs which would appear to have possibilities for offering exploratory experiences for future medical doctors and dentists. There was no emphasis on instruction offered for future engineers, scientists, lawyers, teachers, ministers, and other professional level workers.

Improved Overall Performance. One purpose of the study was to ascertain an answer to the question: Did students in the career group as compared to those in the comparison group demonstrate greater motivation and improved performance? In an attempt to answer the question, data relative to achievement in academic areas and attendance rate were collected from both groups. The instrument "Adult Basic Learning Exam" (see Appendix C for Instruments) was administered to both groups. Twenty-six students in the career group and thirty-six students in the comparison group completed the instrument. An analysis of variance F ratio was computed comparing scores by the two groups on reading, vocabulary, arithmetic computation, and arithmetic problem solving (see Figure 3-1). The career group scored significantly higher in vocabulary and arithmetic problem solving. There was no difference between the groups' scores in reading and arithmetic computation.

Data relative to the students' attendance were collected at the end of the school year from the permanent records. An attendance ratio, days attended to the total number of days school was in session, was computed for each student. Mean scores of .81 for the career group and .87 for the comparison group were computed. A t test data analysis comparing attendance by each group was then computed. A t-value of -2.98 indicated that the comparison group demonstrated a significantly higher school attendance rate than the career group. However, during the

FIGURE 3-1
BASIC EDUCATION ACHIEVEMENT
BY STUDENTS IN ORANGE COUNTY
CAREER AND COMPARISON
HIGH SCHOOL PROGRAMS
1972-73 SCHOOL YEAR

(As measured with "Adult Basic Learning Exam")

Post Test Mean Scores	N	Analysis of Variance F Ratio
Vocabulary		
34.92	25	100.557*
20.61	36	
Reading		
46.19	26	1.584
42.14	36	
Arithmetic Computation		
10.33	24	0.199
11.15	33	
Arithmetic Problem Solving		
7.40	25	4.868*
5.27	33	

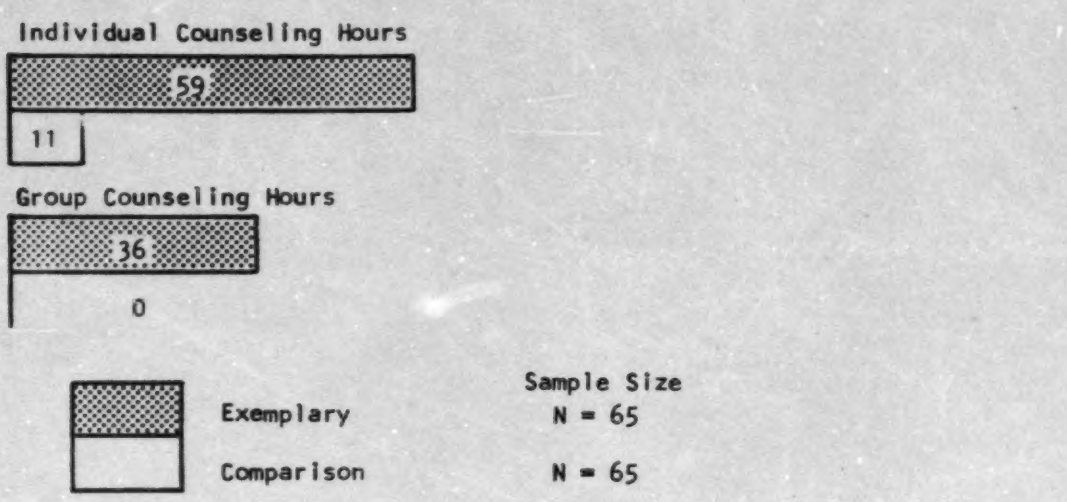
	Sample Size
Career Group	N = 65
Comparison Group	N = 65

*Significant at the .05 confidence level

school year, student busing regulations caused drastic changes in school zoning patterns. This unfortunate event could have created additional stress on school attendance at Wymore Vocational-Technical Center since its purpose was to serve students from all parts of Orange County.

Counseling Service. The UWF Form #1005 was forwarded to the evaluation coordinator for recording counseling service to career and comparison group students. The instruments were returned at the end of the

FIGURE 3-2
HOURS OF COUNSELING RECEIVED
BY CAREER AND COMPARISON HIGH SCHOOL GROUPS
IN ORANGE COUNTY
1972-73 SCHOOL YEAR



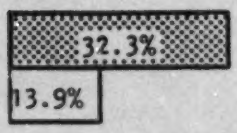
school year with the data (see Figure 3-2) representing counseling service received by career and comparison students. The data indicate that the career group did receive more individual counseling and more group counseling than the comparison group. Data relative to the students' expressed interest in a career choice were gathered with the same instrument (see Figure 3-3). The information indicates that 32.3% of the career students expressed an interest in a career while 13.9% of the comparison group indicated a career interest.

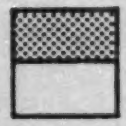
Summary of the Findings. Students in the career group were offered more career related instruction than was offered to students in the comparison group. While 61.5% of the students in the career group participated in laboratory-type career related instruction, 27.7% of the students in the comparison group participated in career related instruction. There was no emphasis on career instruction offered for professional level workers such as engineers, scientists, lawyers, teachers and ministers.

Career students learned more entry level job skills than comparison students.

There was no difference between the groups relative to scores on a multiple-choice type instrument designed to measure knowledge about careers, job opportunities, entrance requirements, preparations, reward, benefits, and working conditions.

FIGURE 3-3
EXPRESSED INTEREST IN AN OCCUPATION
BY CAREER AND COMPARISON HIGH SCHOOL GROUPS
IN ORANGE COUNTY
1972-73 SCHOOL YEAR





% of Exemplary Sample — Sample Size N = 65

% of Comparison Sample — N = 65

Students in the career group demonstrated more positive attitudes toward "school" and 'work in our society" than comparison students.

Students in the career group scored significantly higher in vocabulary and arithmetic problem solving than students in the comparison group. There was no difference between the groups in arithmetic computation, reading, and spelling.

Career education students demonstrate a significantly lower school attendance rate than comparison students.

Career students received more counseling service than comparison students and more students in the career group expresseo an interest in a career or occupation.

Conclusions. To the extent that the instruments were valid, the data reliable and complete, and students selected for the career and comparison groups met the same criteria, the following conclusions are suggested by the findings:

> Students participating in the high school career education project as compared to students participating in traditional academic programs would be expected to:
> 1. receive and participate in more career related curriculum activities.
> 2. score no different on instruments designed to measure the students' knowledge about careers, job opportunities, entrance requirements, preparation, rewards, benefits, and working conditions.

3. demonstrate more positive attitudes toward "school" and "the contribution of work in our society."
4. score significantly higher on vocabulary and arithmetic computation.
5. demonstrate a lower school attendance rate.
6. receive more counseling service.
7. experience higher overall performance on functions such as vocabulary, arithmetic, and more positive attitudes toward school and the contribution of work in our society.

More students in the career project would express an interest in a career than students in traditional academic programs.

RECOMMENDATIONS

The Career Education Project in the Orange County schools has been effective to some extent. A visit to the schools and conversation with students, teachers, and administrators indicates that the staff is working toward the objectives and students are learning. Individual cases are found such as: "One boy became so highly motivated by career education that his attendance rate and grades increased at an unbelievable rate." These isolated cases are also found in the comparison schools. Students in the comparison schools are also achieving new knowledge about careers, planned or unplanned, and desirable learning is occurring. Additional expenditures in the career education program must be justified with additional learning by students in the career project. All of the project objectives were not achieved and this is to be expected in new and developing programs. The program was designed to achieve the objectives at the end of six years in the elementary schools, at the end of three years in the middle schools, and at the end of four years in the high schools. Some additional learning was detected by the instruments designed to measure the learning. Validity of the evaluation design and instruments may be questioned; however, both are believed to be among the best available as indicated by the consultants to the evaluation who are recognized leaders in the field. On the basis of the findings and the conclusions of the evaluation, the following recommendations are suggested to the Orange County School Board for consideration:

A. The program structure, instructional materials, and processes in the career education project should be evaluated for purpose of program improvement to enable the students in the project to fulfill the product objectives of learning more about careers, developing positive attitudes toward employment, and improving overall performance to a greater degree.
B. The high school career education program should expand the curricula to include exploratory instruction for future professional level workers in engineering, law, the ministry, teaching, science, and other professional level occupations.
C. The instructional objectives at the classroom level should be refined in order that precise measuring instruments may be developed for future evaluations.
D. Because of its nature, complexity and size, expansion of the existing career education program should be limited until all components of the present program are fully functioning and all of the objectives have been achieved.

APPENDIX A
SELECTED BIBLIOGRAPHY

1. Career Education. Washington: U. S. Government Printing Office, Superintendent of Documents Catalog No. H.E. 5.280: 80075, 1971.

2. Mager, Robert F. and Beach, Kenneth M. Developing Vocational Instruction. Palo Alto, Calif.: Fearon Publishers, 1967.

3. Proehl, Carl W. Proposal for Exemplary Program or Project in Vocational Education. Tallahassee, Florida: Department of Education, Division of Vocational, Technical, and Adult Education, 1971. (unpublished proposal submitted to U.S.O.E. for funding under Part D of Vocational Education Amendment of 1968).

4. Multi-Occupations at Harkness Center, Progress Report NR1, Buffalo: The Harkness Center, January 1968.

5. Wasden, Jed W. An Exemplary Program for Occupational Preparation in Selected Agriculture and Industrial Activities for Small High Schools in Utah. Salt Lake City: Utah State Board for Vocational Education, 1970.

6. Darcey, Robert L. An Experimental High School Course in Occupational Opportunities and Labor Market Processes. Athens: Ohio University, 1968.

7. Abner, George and Wright, C. R. Project for Slow Learning Boys in Alton Senior High School. Springfield, Ill: Board of Vocational Education, 1967.

8. Gibbs, William E. and others. "A Comparative Study of Conventional and Programmed Instruction in Bookkeeping," The Journal of Educational Research, Vol. 61, No. 7 (March, 1968).

9. Kraft, Richard H. P. Vocational-Technical Education in Human Resource Development in Florida: A State Wide Evaluation. Tallahassee: Florida State University, Department of Educational Administration, 1970.

10. Pensacola News Journal. Section G., July 18, 1971.

11. Delon, Floyd G. "A Field Test of Computer Assisted Instruction in First Grade Mathematics," Educational Leadership, Vol. 28, No. 2 (November, 1970).

12. Perkins, Lawrence H. Evaluation of Exemplary Programs in Dade, Duval, Escambia, and Hillsborough Counties. Pensacola: The University of West Florida, Department of Vocational-Technical Education, 1971.

13. Holstein, Herbert B. Improving a Rural Area School Program with Expanded Vocational Education Services by Utilizing Comprehensive Career Orientation and Exemplary Activities. (Interim Report). Hamlin, W. Va.: Lincoln Co. Schools, December, 1971.

14. Kansas State Advisory Council for Vocational Education. An Exemplary Program in Occupational Education in Typical Kansas Rural, Rural-Urban and Urban School Settings. (An Evaluation Report). Topeka: Kansas State Board of Education, 1971.

15. Minneapolis Public Schools, Special School District 1. Work Experience Career Exploration Program (WECEP) Advisory Committee Report: Evaluation and Recommendations. Minneapolis, Minn.: Minneapolis Public Schools, June, 1972.

16. Knox County Board of Education. Contemporary Curriculum for Career Development. Knoxville, Tenn.: Knox County Board of Education, 1972.

17. Connecticut State Department of Education. Career Assessment Program: Stanford High School. Stanford: Division of Vocational Education, Connecticut State Department of Education, June, 1972.

18. Guilford, J. P. Fundamentals of Statistics in Psychology and Education. New York: McGraw-Hill Book Company, 1965.

19. Siegel, Sidney. Non-Parametric Statistics for the Behavioral Science. New York: McGraw-Hill Book Company, 1956.

20. Van Dalen, Deobold V. Understanding Educational Research. New York: McGraw-Hill Book Company, 1962.

APPENDIX B
CONSULTANTS FOR THE STUDY

Dr. Neil C. Aslin, Chairman, Educational Administration and Supervision, University of Missouri, Columbia, Missouri.

Dr. George M. Barry, Assistant Professor, Field Research Coordinator, Educational Research and Development Center, The University of West Florida, Pensacola, Florida.

Dr. Virginia Bert, Consultant for Research, State Department of Education, Tallahassee, Florida.

Dr. John F. Crittenden, Associate Professor, Vocational-Technical Education, The University of West Florida, Pensacola, Florida.

Dr. Floyd Delon, Associate Dean, College of Education, University of Missouri, Columbia, Missouri.

Dr. Ken Eaddy, Administrator, Vocational Research and Evaluation, State Department of Education, Tallahassee, Florida.

Dr. Roy Giehls, Consultant for Evaluation, State Department of Education, Tallahassee, Florida.

Dr. Carl Kreisler, Director of Curriculum, College of Education, Western Kentucky University, Bowling Green, Kentucky.

Dr. Warren L. Leffard, Associate Professor, Vocational-Technical Education, The University of West Florida, Pensacola, Florida.

Dr. H. H. London, Professor, Emeritus, of Industrial Education, University of Missouri, Columbia, Missouri.

Dr. W. R. Miller, Professor and Chairman, Department of Practical Arts and Vocational-Technical Education, University of Missouri, Columbia, Missouri.

Dr. Richard L. Newston, Assistant Professor, Elementary Education, The University of West Florida, Pensacola, Florida.

Dr. Carl W. Proehl, Professor and Director of Special Projects, Vocational-Technical Education, The University of West Florida, Pensacola, Florida.

Dr. Russell F. Robbins, Professor and Chairman, Elementary Education, The University of West Florida, Pensacola, Florida.

Dr. Robert Slemaker, Department Head, Elementary Education, Western Kentucky University, Bowling Green, Kentucky.

Dr. Charles H. Wentz, Assistant Professor, Vocational-Technical Education, The University of West Florida, Pensacola, Florida.

APPENDIX D

OBSERVATIONS BY TEACHERS AND PRINCIPALS RELATIVE TO STUDENT REACTION TO CAREER RELATED INSTRUCTION

In May 1972, eight months after career education began, principals of the six elementary schools and some teachers participating in the Orange County Career Education Program were asked to express their opinion on how the career related instruction had affected their students. While all of the principals and teachers were highly favorable of the project and indicated that their students were more highly motivated than before the project began, they reported the following observations·

Career education integrated into social studies does motivate students to perform better.

Hands on activities in career education instruction enhances learning and interest.

Career education needs to be a part of the instruction every day.

They want industrial arts, home economics, and business education every day.

Career education is good; we are going in the right direction.

Mobile units or classrooms would be ideal for integrating career education in the schools.

Career education is the most important technique we have used for motivating students to attend and stay in school.

Career education appears to be good for vocational adjustment.

Teachers accept the career education with varying degrees, those who are hesitant to participate feel left out.

We can show children of migrant workers and low income families that they are not destined to continue in the path of their parents.

Students find that they don't have to be underachievers simply because they are from poor or poverty stricken families, career education gives them knowledge of new opportunities.

Career education develops the appreciation of the value of property. In one elementary school 265 window glasses were broken and replaced during the year before career education. In the same school only one window glass was broken during the initial year of career education. School principals believe this indicates a more positive attitude toward work, school, and society.

Teachers who are oriented toward students rather than the subject are more successful in career education.

Academic achievement has been much higher since career education was implemented.

There are no teachers who reject career education, this is the philosophy of the schools.

The human worth and dignity has more meaning to students who participate in career education.

The field trips are helpful and motivating.

Parents favor the program after they become familiar with it.

The curriculum with career education has more to offer students and the students recognize it.

The non college bound students benefit more than college bound students.

Discipline problems have eased since career education came into the schools.

They hope the project will be continued.

The parents are needed to support the concept.

Students learn more about their parents' jobs and see the meaning and importance of work through career education.

More teachers are needed to give more instruction in career education.

More space is needed: a program should not be started without adequate space.

More materials, equipment and supplies are needed.

Need a guidance program in the elementary schools to parallel career education.

I. Q. scores should not be used or made available.

Need a staff in-service day to fully orient the career education concept to all teachers.

More instructional materials are needed.

Need more community business men involved in the project.

Need a more efficient method of processing order forms. Supplies and materials are delayed as long as three months.